

CLAIM SUMMARY

1. (Cancelled)
2. (Cancelled)
3. (Original) A method of vaporizing a substance at temperature below the vaporizing temperature of the substance at a preset pressure, the method comprising:
 - inserting the substance into an envelope shaped to create an electron vortex of electrons emitted from the substance;
 - sealing the envelope at the preset pressure; and
 - heating the substance in an oven at an oven temperature below the vaporizing temperature of the substance at the preset pressure and for a time sufficient to generate electron emissions from the substance and create the electron vortex which allows vaporization of the substance at an oven temperature below the vaporizing temperature of the substance at the preset pressure.
4. (Original) The method of Claim 3, wherein the electron vortex creates a magnetic confinement field without external excitement.
5. (Original) The method of Claim 3, wherein the electron vortex accelerates the emission of electrons in the substance which increases the heat of the substance above that of the oven temperature.
- 6.-10. (Cancelled)
11. (Currently Amended) The methods of Claims 2, 3, ~~5~~ and ~~9~~, wherein the oven temperature is below the melting temperature of the substance at the preset pressure.
12. (Currently Amended) The methods of Claims ~~2~~, 3, ~~5~~ and ~~9~~, wherein the oven temperature is between 30% and 40% of the vaporizing temperature of the substance at the preset pressure.
13. (Currently Amended) The methods of Claims ~~1~~, ~~2~~, 3, ~~5~~ and ~~9~~, wherein the preset pressure is substantially a vacuum.

14. (Currently Amended) The methods of Claims ~~1, 2, 3, 5 and 9~~, wherein the envelope is tear-shaped.

15. (Currently Amended) The methods of Claims ~~1, 2, 3, 5 and 9~~, wherein the envelope is ovoid-shaped.

16. (Cancelled)

17. (Currently Amended) The methods of Claims ~~1, 2 and 3~~, wherein the substance is inserted in a tapered crucible, and the crucible is placed in the envelope.

18. (Currently Amended) The methods of Claims ~~1, 2, 3 and 5~~, wherein the substance is inserted in a tapered crucible, the crucible is placed in a tapered enclosure and the enclosure is placed in the envelope.

19. (Previously Presented) A method of vaporizing a substance at temperature below the vaporizing temperature of the substance at a preset pressure, the method comprising:

providing a tapered structure in an envelope to create an electron vortex;
inserting the substance into the envelope adjacent the tapered structure;
sealing the envelope at the preset pressure; and

heating the substance with energy to produce a temperature below the vaporizing temperature of the substance at the preset pressure and for a time sufficient to generate electron emissions within the envelope and create the electron vortex which allows vaporization of the substance at the applied energy produced temperature below the vaporizing temperature of the substance at the preset pressure.

20. (Previously Presented) The method of Claim 19, wherein the tapered structure is the interior of the envelope.